

What is Claimed is:

1. A method of calibrating an electrochemical sensor implanted in a patient and comprising one or more working electrodes, the method comprising:

- (a) generating a signal from each of the one or more working electrodes;
- 5 (b) determining if each of conditions (1) to (3) are met
 - (1) the signal from each of the one or more working electrodes differ by less than a first threshold amount,
 - (2) the signals from each of the one or more working electrodes are within a predetermined range, and
 - 10 (3) a rate of change of the signals from each of the one or more working electrodes is less than a second threshold amount,
 - (c) determining a calibration value by assaying a calibration sample of a patient's body fluid; and
 - (d) relating the calibration value to at least one of the signals from the one or
 - 15 more working electrodes if the conditions in step (b) are met.

2. The method of claim 1, further relating the calibration value to at least one of the signals from the one or more working electrodes only if a predetermined period of time has passed since the sensor was implanted in the patient.

3. The method of claim 1, further relating the calibration value to at least one of the signals from the one or more working electrodes only if a signal from a temperature probe disposed on the electrochemical sensor is within a predetermined range.

4. The method of claim 3, further comprising measuring a conductivity of a body fluid using the temperature probe to determine a temperature of the body fluid.